IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS : Larry D. HEBEL *et al.*   CONFIRMATION NO.: 8301

SERIAL NUMBER : 09/532,404   EXAMINER: Quang N. Nguyen

FILING DATE : March 22, 2000   ART UNIT: 2141

FOR : DYNAMIC METHOD FOR CONNECTING A CLIENT TO A SERVER APPLICATION

SUPPLEMENTAL BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Further to the "Notification of Non-Compliant Appeal Brief" mailed July 25, 2006, Appellants respectfully submit a Supplemental Brief on Appeal pursuant to 37 C.F.R. § 41.37.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned for under 37 C.F.R. § 1.136(a), and any fees required therefore (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 033975 **(Ref. No. 019287-0318991)**.

REQUIREMENTS OF 37 C.F.R. § 41.37

I.   Real Party in Interest – *37 C.F.R. § 41.37(c)(1)(i)*

By virtue of the Assignment recorded January 12, 2004, at reel 014869, frame 0133, the real party in interest is Computer Associates Think, Inc.

II.   Related Appeals and Interferences – *37 C.F.R. § 41.37 (c)(1)(ii)*

There are no related appeals or interferences.

III.   Status of Claims – *37 C.F.R. § 41.37 (c)(1)(iii)*

Pending: Claims 7-10 and 16-36 are pending.

Cancelled: Claims 1-6, 11-15 are cancelled.

Rejected: Claims 7-10 and 16-36 stand rejected.

Allowed: No claims have been allowed.

IV.   Status of Amendments – *37 C.F.R. § 41.37 (c)(1)(iv)*

No amendments have been filed subsequent to the Final Office Action mailed August 10, 2004, and no amendments are being submitted herewith.

V.   Summary of Claimed Subject Matter – *37 C.F.R. § 41.37 (c)(1)(v)*

In one embodiment of the invention, a method for communication between a client and a server in a computer network may include the client sending a message to the server, where the message may have a priority level and request processing by the server (*e.g.*, Specification at p. 11, lines 14-22; Fig. 4A). The message may be received at the server, and the server may read the priority level of the message and determine a current rotation position of the client (*e.g.*, Specification at p. 12, lines 1-7, 11-18; Fig. 4A). The message may be inserted into a message queue for processing in accordance with the priority level and the current rotation position of the client (*e.g.*, Specification at p. 12, lines 6-7; Fig. 4A).

In another embodiment of the invention, a network system for processing messages may include a plurality of clients coupled to a server (*e.g.*, Specification p. 9, lines 6-17; Fig. 3, elements 11 and 13). The plurality of clients may generate and communicate messages to the server, and the messages may have one or more priority levels and request processing by the server (*e.g.*, Specification at p. 11, line 14 – p. 13 line 11; Figs. 4A, 5A-5B). The server may receive messages from the clients, and the server may determine a priority level for each message (*e.g.*, Specification at p. 12, lines 1-7, 11-18; Fig. 4A). The server may process the messages according to the priority levels of the messages and the rotation positions of the clients (*e.g.*, Specification at p. 2, lines 6-10; Fig. 4A).

The preceding citations to the Specification and drawings are exemplary only and, as such, should not be viewed as limiting.

VI.   Grounds of Rejection to be Reviewed on Appeal – *37 C.F.R. § 41.37 (c)(1)(vi)*

A)   Claims 7-10 and 16-18 have been previously rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over U.S. Patent No. 5,699,523 to Li *et al.* ("Li") in view of U.S. Patent No. 5,231,633 to Hluchyj *et al.* ("Hluchyj").

B)   Claims 19-36 have been previously rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over Li in view of Hluchyj and further in view of U.S. Patent No. 5,179,708 to Gyllstrom *et al.* ("Gyllstrom").

VII.   Argument – *37 C.F.R. § 41.37 (c)(1)(vii)*

The final Office Action, mailed August 10, 2004, rejected Claims 7-10 and 16-18 under 35 U.S.C. § 103(a) as being unpatentable over Li in view of Hluchyj. The Office Action rejected Claims 19-36 under 35 U.S.C. § 103(a) as being unpatentable over Li in view of Hluchyj and further in view of Gyllstrom. For at least the reasons set forth below, Appellants traverse the rejections of claims 7-10, 16-18, and 19-36 and respectfully request a reversal of the rejections.

First, Appellants respectfully assert that Li, Hluchyj, and/or Gyllstrom fail to disclose, teach, or suggest at least the end-server processing described by "sending a message having a priority level from the client to the server, the message requesting processing by the server ... receiving the message at the server ... reading the priority level of the message at the server [and] determining at the server a current client rotation position of the client" as recited, in part, in Claim 7. In contrast, the Hluchyj system (what the Office Action equates with "the server") is clearly interposed between end systems, with the first end system communicating packets for use or processing by the second end system – the packets do not request processing by the Hluchyj system, which performs the asserted packet multiplexing. For example, Hluchyj discloses that in typical systems:

> [b]efore the flow of packets between the end systems begins, a connection (or virtual circuit) is established between them. This connection determines the path (i.e., the nodes and internodal trunks) that the fast packets will follow from end to end. FIG. 2 depicts a switch typically used at an intermediate node, that receives fast packets from one or more input trunks and switches them to one or more output trunks.

Hluchyj, col. 2, lines 1-8. The Hluchyj system then enqueues/dequeues packets for transmission via the internodal trunk. Hluchyj, col. 5, lines 38-42. More specifically, Hluchyj teaches that packets intended for other recipients are prioritized, put in queues, and multiplexed at such an internodal trunk for transmission to particular recipients beyond the intermediate nodes and internodal trunks. See Hluchyj, col. 1, lines 6-12; col. 4, lines 26-27; see also Office Action at 7. Moreover, Hluchyj repeatedly teaches that after enqueueing/dequeueing at the intermediate trunk, the packets are transmitted from the trunk to the expected recipient for subsequent processing. See, e.g., Hluchyj, col. 4, lines 14-17; col. 4, lines 26-27; col. 4, lines 61-66; col. 5, lines 38-42; col. 6, lines 57-68; col. 9, lines 32-40. Indeed, Hluchyj teaches that the disclosed technique attempts to solve bandwidth problems for multiple traffic types for transmission to multiple recipients along a network trunk. See Hluchyj, col. 4, lines 14-17. In other words, Hluchyj teaches that after enqueueing/dequeueing at an intermediate node

based on traffic type, the packets are transmitted along the internodal trunk to the recipient for subsequent requested processing. *See, e.g.,* Hluchyj, Figs. 2, 4, and 5.

Similarly to Hluchyj, Li discloses "[a] device for communication *between* at least one client and at least one server." Li, Abstract (emphasis added); Title. Li further discloses that the "present invention relates to a router device *between* a client and a server, the method for using the device, and the use of the device." Li, col. 1, lines 9-11 (emphasis added). While not asserted again Claim 7, Appellants further submit that Gyllstrom fails to account for these deficiencies of Hluchyj and Li. For example, Gyllstrom also teaches transmission to the "destination" or "recipient" process by a message-delivery function, which determines the message priority. *See* Gyllstrom, Abstract; Title; Figs. 4-5; *see also* Office Action at 5.

In response, the Examiner argues, for example, that "sending a message having a priority level from the client to the server, the message requesting processing by the server," in Claim 7, "can be given broad and reasonable interpreted [*sic*] in light of specification as sending a message *(data/voice packets)* having a priority level *(i.e., having a field indicating the degree of priority)* from the client *(from a sending user/application)* to the server, the message requesting processing *(prioritizing, selectively discarding, multiplexing and transmitting, etc.)* by the server *(i.e., by an information processing server, a proxy server, a router, or an internodal trunk, etc).*" Office Action at 7. Yet Appellants respectfully point out that "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art" according to MPEP § 2143.03. Claim 7 recites that the message requests "processing by the server," but nowhere has the Examiner explained or directed Appellants to any teaching that Hluchyj's voice/data packets request processing – including the asserted prioritizing, selectively discarding, multiplexing and transmitting – by the internodal trunk. Indeed, the cited portions seem to teach away from such an interpretation. For example, Hluchyj teaches that, within the internodal trunk, "packets within a particular traffic type are selected for transmission through use of a head of line priority service ... a packet discard mechanism ... or both." Hluchyj, Abstract. In another example, Hluchyj discloses a "fast packet priority queueing, selective discarding, and bandwidth allocation methodology." In one embodiment of this methodology, "fast packets of differing traffic

types are prioritized pursuant to differing prioritization methods vis-à-vis one another. The prioritized packets from each group are then multiplexed and transmitted." Hluchyj, Summary. In other words, the packets in Hluchyj do not request the multiplexing, discarding, or transmitting by the internodal trunk, they are selected for it based on traffic type. Accordingly, the Office Action singularly fails to show that Hluchyj (even when combined with Li and Gyllstrom) teaches the end server processing claimed by "sending a message having a priority level from the client to the server, the message requesting processing by the server ... receiving the message at the server ... reading the priority level of the message at the server [and] determining at the server a current client rotation position of the client" as recited in Claim 7.

In a more specific example, Appellants respectfully assert that neither Li nor Hluchyj, whether alone or in combination, teach, suggest, or disclose "determining at the server a current client rotation position of the client" as recited, in part, in Claim 7. Prior Office Actions agree that Li fails to teach such a limitation, but apparently allege that the traffic type round robin in Hluchyj accounts for this deficiency. As described above, Hluchyj repeatedly discloses that its packets are routed by traffic type – not "a current client rotation position of the client". See Hluchyj, Title; Abstract; col. 1, lines 7-12; col. 5, lines 29-33. Hluchyj teaches that routing by traffic type attempts to solve bandwidth problems for multiple traffic types for transmission along a network trunk. See Hluchyj, col. 4, lines 14-17. This teaching of Hluchyj is further reflected in the claims (Hluchyj's independent Claims 1, 5, 6, 8, 9, 14, 21, and 30 each recite a particular "method of post-switching multiplexing fast packets for differing traffic types"). In short, Hluchyj teaches that each packet is queued based on a traffic type of the packet, not "a current client rotation position of the client" as recited, in part, in independent Claim 7.[1] Appellants further submits that Gyllstrom fails to account for these deficiencies of Hluchyj and Li. Regardless, the Examiner has repeatedly failed to

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[1] Appellants further assert that nowhere does Hluchyj appear to discuss referencing the sending node, source, or client to determine placement in the weighted round robin (WRR). Indeed, the source of the packets in Hluchyj appears to be irrelevant – each embodiment appears to queue packets in the WRR based on the traffic type. Hluchyj clearly fails to teach, suggest, or disclose "a current client rotation position of the client" as recited in Claim 7.

show how Hluchyj's traffic type equates with "a current client rotation position of the client."

Instead, the Examiner first argued that "the language of the limitation ... can be given broad and reasonable interpreted *[sic]* in light of the specification." Office Action mailed July 14, 2003 at 6. Yet again Appellants respectfully point out that "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art" according to MPEP § 2143.03. Appellants submit that the Office Action is effectively *disregarding* "a current client rotation position of the client" without cited support from the current specification for such an interpretation and in contrast to the plain language of Claim 7. In the next Office Action, the Examiner then argued that "one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references." Office Action mailed February 3, 2004 at 8 (citations omitted). Yet this curiously ignores Appellants' repeated assertions that "neither Li nor Hluchyj, whether alone or in combination, teach, suggest, or disclose 'determining at the server a current client rotation position of the client' as recited, in part, in Claim 7." *See, e.g.*, Response filed January 14, 2004 (emphasis added). Moreover, the Examiner still relies on Hluchyj to attempt to show this limitation and has yet to provide any such teaching in Li or Gyllstrom – in fact, the Examiner admitted that Li fails to include such a teaching. In short, the Examiner has yet to (and can not) show where Li, Hluchyj, and Gyllstrom (whether alone or in combination) teach, suggest, or disclose "a current client rotation position of the client" as recited in Claim 7.

For at least these reasons, Li, Hluchyj, and Gyllstrom, either alone or in combination, fail to teach, suggest, or disclose at least "sending a message having a priority level from the client to the server, the message requesting processing by the server ... receiving the message at the server ... reading the priority level of the message at the server [and] determining at the server a current client rotation position of the client" as recited, in part, in Claim 7. For analogous reasons, Appellants respectfully assert that Li, Hluchyj, and/or Gyllstrom fail to teach various limitations of independent Claims 16, 24, and 32. Accordingly, Appellants respectfully request at least a reversal of the rejections – if not the allowance – of independent Claims 7, 16, 24, and 32 and claims depending therefrom.

VIII. <u>**Claims Appendix**</u> – *37 C.F.R. § 41.37 (c)(1)(viii)*

The pending claims (claims 7-10 and 16-36) are attached in **Appendix A**.

IX. <u>**Evidence Appendix**</u> – *37 C.F.R. § 41.37 (c)(1)(ix)*

Appendix B: None

X. <u>**Related Proceedings Index**</u> – *37 C.F.R. § 41.37 (c)(1)(x)*

Appendix C: None

CONCLUSION

For the reasons advanced above, Appellants respectfully submit that the present claims are allowable over the cited prior art references. Reversal of the obviousness rejection under 35 U.S.C. § 103(a) is respectfully requested. If questions remain regarding the above, please contact the undersigned.

Please apply any charges or credits to Deposit Account No. 033975.

Date: August 8, 2006   Respectfully submitted,

By: _____

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APPENDIX A: CLAIMS APPENDIX – *37 C.F.R. § 41.37 (c)(1)(viii)*

1-6.   (Cancelled)

7.   (**Previously Presented**)   A method for communication between a client and a server in a computer network, comprising the steps of:

sending a message having a priority level from the client to the server, the message requesting processing by the server;

receiving the message at the server;

reading the priority level of the message at the server;

determining at the server a current client rotation position of the client; and

inserting the message into a message queue for processing by the server in response to the priority level and the current client rotation position of the client.

8.   (**Previously Presented**)   The method of Claim 7, further comprising the steps of sequentially processing a plurality of messages from the message queue by the server.

9.   (**Previously Presented**)   The method of Claim 8, further comprising the steps of storing incoming messages for insertion into the message queue during the sequential processing of messages by the server.

10.   (**Previously Presented**)   The method of Claim 7, further comprising the steps of:

determining address information for the server by the client; and

creating at the client the message including the address information for the server.

11-15. (Cancelled)

16.   (**Previously Presented**) A network system for processing messages, comprising:

a plurality of clients operable to generate and communicate messages having one or more priority levels to a server, each message requesting processing by the server; and

the server coupled to the clients, the server operable to receive one or more messages from the clients, to determine a priority level for each message, and to process the messages according to the messages' priority levels and the clients' rotation positions.

17.   (**Previously Presented**)   The network system of Claim 16, wherein the server is further operable to process messages that have different priority levels in order of the different priority levels.

18.   (**Previously Presented**)   The network system of Claim 16, wherein the server is further operable to processes messages that have a same priority level and were received from different clients in order of the different clients' rotation positions.

19.   (**Previously Presented**)   The network system of Claim 16, wherein the server is further operable to receive a first message from a first client and a second message from a second client, to process the first message before the second message if the first message's priority level is higher than the second message's priority level, and to process the first message before the second message if the first and second messages have the same priority level and the first client's rotation position is before the second client's rotation position.

20.   (**Previously Presented**)   The network system of Claim 16, wherein the server is further operable to store the messages in a queue according to the messages' priority levels and the clients' rotation positions and to process the message in order of storage in the queue.

21.   **(Previously Presented)**   The network system of Claim 20, wherein the server is further operable to store messages that have different priority levels in order of the different priority levels.

22.   **(Previously Presented)**   The network system of Claim 20, wherein the server is further operable to store messages that have a same priority level and were received from different clients in order of the different clients' rotation positions.

23.   **(Previously Presented)**   The network system of Claim 16, wherein the server is further operable to receive a first message from a first client and a second message from a second client, to store the first message before the second message in a queue if the first message's priority level is higher than the second message's priority level, to store the first message before the second message in the queue if the first and second messages have the same priority level and the first client's rotation position is before the second client's rotation position, and to process the first and second message in order of storage in the queue.

24.   **(Previously Presented)**   A server operable to couple to a plurality of clients, to receive one or more messages requesting processing by the server from the clients, to determine a priority level for each message, and to process the messages according to the messages' priority levels and the clients' rotation positions.

25.   **(Previously Presented)**   The server of Claim 24, wherein the server is further operable to process messages that have different priority levels in order of the different priority levels.

26.   **(Previously Presented)**   The server of Claim 24, wherein the server is further operable to process messages that have a same priority level and were received from different clients in order of the different clients' rotation positions.

27.   (**Previously Presented**)   The server of Claim 24, wherein the server is further operable to receive a first message from a first client and a second message from a second client, to process the first message before the second message if the first message's priority level is higher than the second message's priority level, and to process the first message before the second message if the first and second messages have the same priority level and the first client's rotation position is before the second client's rotation position.

28.   (**Previously Presented**)   The server of Claim 24, wherein the server is further operable to store the messages in a queue according to the messages' priority levels and the clients' rotation positions and to process the messages in order of storage in the queue.

29.   (**Previously Presented**)   The server of Claim 28, where the server is further operable to store messages that have different priority levels in order of the different priority levels.

30.   (**Previously Presented**)   The server of Claim 28, where the server is further operable to store messages that have a same priority level and were received from different clients in order of the different clients' rotation positions.

31.   (**Previously Presented**)   The server of Claim 24, wherein the server is further operable to receive a first message from a first client and a second message from a second client, to store the first message before the second message in a queue if the first message's priority level is higher than the second message's priority level, to store the first message before the second message in the queue if the first and second messages have the same priority level and the first client's rotation position is before the second client's rotation position, and to process the first and second message in order of storage in the queue.

32.   (**Previously Presented**)   A method for processing messages at a server, the method comprising:

receiving a first message from a first client, the first message requesting processing by the server;

determining the first message's priority level;

receiving a second message from a second client, the second message requesting processing by the server;

determining the second message's priority level; and

processing the messages in order according to the messages' priority levels and the clients' rotation positions.

33.   (**Previously Presented**)   The method of Claim 32, wherein processing the messages in order according to the messages' priority levels and the clients' rotation positions further comprises:

processing the messages in order of the messages' priority levels if the messages have different priority levels; and

processing the messages in order of the clients' rotation positions if the messages have a same priority level.

34.   (**Previously Presented**)   The method of Claim 32, wherein processing the messages in order according to the messages' priority levels and the clients' rotation positions further comprises:

processing the first message before the second message if the first message's priority level is higher than the second message's priority level; and

processing the first message before the second message if the first and second messages have a same priority level and the first client's rotation position is before the second client's rotation position.

35. **(Previously Presented)** The method of Claim 32, wherein processing the messages in order according to the messages' priority levels and the clients' rotation positions further comprises:

storing the messages in a queue in order of the messages' priority levels if the messages have different priority levels;

storing the messages in the queue in order of the clients' rotation positions if the messages have a same priority level; and

processing the messages in order of storage in the queue.

36. **(Previously Presented)** The method of Claim 32, wherein processing the messages in order according to the messages' priority levels and the clients' rotation positions further comprises:

storing the first message before the second message in a queue if the first message's priority level is higher than the second message's priority level;

storing the first message before the second message in the queue if the first and second messages have a same priority level and the first client's rotation position is before the second client's rotation position; and

processing the first and second messages in order of storage in the queue.

APPENDIX B: EVIDENCE APPENDIX – *37 C.F.R. § 41.37 (C)(1)(IX)*

None.

Appendix C: Related Proceedings Appendix – *37 C.F.R. § 41.37 (c)(1)(x)*

None.